characteristic of the island. One of the two diagnostic symptoms noted by quarantine officers, is a recurrent swelling of the knee of which this man complained. I have found no reference to the color of the interior of these joints when affected with the characteristic arthritis of Malta fever, but it may suffice to explain whatever is not accounted for by the hemorrhage into the fatty masses caused by pinching or other trauma.

Microscopic report of tissue was as follows: Microscopic sections show the tissue to be made up primarily of normal adipose tissue. It is extremely vascular. The connective tissue cells are infiltrated with fat, and are usually blood-streaked. Some leukocytic infiltration wreathes the smaller vessels.

Strands and areas of young connective tissue cells are demonstrable especially in highly vascularized areas. These are stellate with anastomosing branches. Some are spindle-shaped. These embrace a mucoid substance. Diagnosis: Myxolipoma.

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ARTIFICIAL PNEUMOTHORAX IN ADVANCED LUNG TUBERCULOSIS.

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During the last few years the operation of artificial pneumothorax as a therapeutic procedure in a certain type of cases of lung tuberculosis has come into general use and its value determined.

Following favorable reports from all operators who have obtained forty-five or fifty per cent. of recoveries in an otherwise hopeless condition, it is natural that the attention of clinicians should turn to the possible value of lung compression in other stages of the disease than that in which the production of an artificial pneumothorax may be said to be the operation of choice.

Tuberculosis mainly confined to one lung, not too far advanced but advancing under proper treatment, while the opposite lung is fairly free from disease, represent the ideal conditions under which a favorable outcome may be expected from this method of treatment, but only a small percentage of cases correspond to this description. The consideration of other indications for compression, such as very early cases, hemorrhage, and advanced bilateral disease in which delay of its progress or amelioration of its symptoms may be hoped for is at the present time extremely important. The following series of cases is reported for the reason that they all present the same conditions, viz., advanced bilateral disease with cavities in one lung so situated that constant and wearing cough was the result.

When lying in certain relations to the larger bronchi cavities may act as reservoirs for pus and be emptied at intervals without greatly depressing the patient. In the cases here reported the cavities were situated above the hilus, draining a large area of softened tissue directly into the bronchi and therefore rapidly weakening the patient by a constant cough which could not be controlled by drugs, or by change of position. It was hoped by compressing the lung containing these cavities to relieve this distressing symptom and therefore prolong life or at least make it more endurable.

Case I. This patient has been ill about two years and on examination presents the following conditions: Consolidation of the entire upper part of the left lung with cavities above the hilus and partial consolidation of the base. The right lung is less involved but shows consolidation above the clavicle and an area of partial consolidation extending from the hilus to the base. These observations were confirmed by the Rentgenogram. The cough was severe, and expectoration abundant and fever high. In addition to the tuberculosis the patient suffered from a chronic nephritis. During the first week in June, 1913, his left lung was compressed by one thousand cubic centimeters of nitrogen injected at intervals. Following this compression the cough became very much better, the temperature came down and expectoration practically ceased. In fact he was so much improved that he went to the country for two months. On September 24th the cough again becoming troublesome he was given another compression which relieved it. The nephritis however had become much worse and on October 23rd, 1913, he died of uremia. No further X-rays were obtained but examination of his chest showed no particular change in the condition of his lungs.

Case II. This patient was a woman, having advanced tuberculosis of both lungs, large cavities in the left and a constant and wearing cough. She was much emaciated, had high afternoon temperature and night sweats. In the hope of relieving for a time the distressing cough her left lung was compressed early in September. Following this the temperature came down, appetite improved and cough practically ceased. This improvement lasted for two months when softened tissue in the opposite lung broke down and she died in December.

Case III. This patient corresponds to the type of advanced bilateral disease before described.

There is diffuse disease of the right lung with a large cavity at the apex. The left lung shows a general infiltration with many tubercles scattered throughout, but it is less advanced than the right. The patient suffered from severe cough which seemed largely due to the cavity at the right apex. Following compression of the right lung the cough and expectoration were notably diminished. Patient improved markedly and the compression was maintained from September 22nd until the present.

The Roentgenograms taken by Dr. Anna K. Davenport after compression show the right lung compressed against the posterior wall and the alteration in size and position of the cavity. As a result of this compression the patient's cough improved very much. Expectoration that was formerly very profuse diminished to one ounce to one ounce and a half per day. The present condition is satisfactory. No marked progress has yet occurred in the opposite lung. The cough, considering the advanced nature of the disease, is not severe.

Case IV. This patient showed no change in her condition after compression. She has been ill several years and at the time of operation was much emaciated and very weak. X-rays could not be

obtained but physical examination showed advanced tuberculosis of both lungs with cavities in each. Lung compression was done in September, 1913, and repeated in October, but no effect either for better or worse could be discerned. This patient's disease has steadily progressed as would be expected and the absence of even temporary improvement is attributed to the fact that cavities were present in both lungs.

Case V. This patient was a woman 65 years old with advanced tuberculosis of both lungs. Examination and X-rays showed a large cavity in the right lung above the hilus, which was the probable cause of constant and distressing cough. In November, 1913, this lung was partially compressed with nitrogen gas which resulted in a marked reduction in cough and expectoration and in reduction of temperature. Following the operation the sputum averaged an ounce to one and one-half ounces, while before from four to six ounces daily were expectorated. As the gas became absorbed the cough increased and the patient requested further compression. The further history of the case differs in no way from the usual course of advanced tuberculosis and at the present writing the disease has increased, but no more than one would expect in similar cases without operation.

On going over this series of cases we may conclude that partial compression of the lung in certain advanced conditions of tuberculosis may result in improvement, where the distressing cough is due to a cavity draining into a large bronchus.

We are also impressed with the fact that compression of the lung in these advanced bilateral cases has not been followed by rapid increase of the process in the opposite lung.

In fact all of the cases, with the exception of case IV, were so much relieved and so much improved as to comfort, appetite and so forth, that I shall continue to advocate this procedure in those conditions which correspond to the above described classification, even though a temporary relief only may be expected.

IODINE A SPECIFIC GERMICIDE IN RESPIRATORY AFFECTIONS.

(Preliminary Report.)

By SANFORD BLUM, M. S., M. D., San Francisco Polyclinic.

Few drugs have so successfully stood the test of time as iodine. Not only does its past record bear evidence to its worth but the esteem in which it is held at present is evidenced by its unanimous employment in the practice of medicine. It is used not only as an antisyphilitic, but in gynecology, dermatology, internal medicine, pediatrics, surgery, and in every branch of medicine.

The methods of administration comprise practically all methods known to the physician. It is given internally in the form of the various salts, the tincture, and in organic combinations. Externally iodine and its compounds, organic and inorganic, are used. It is used as a local application to mucous membranes, in gargles, hypodermically, in suppositories and by inhalation.

Its effect is known. The mode of action is obscure.

Iodine is classified (with especially arsenic, iron, mercury), as an alterative. This is equivalent to saying that its mode of action is unknown, for an "alterative is a medicine or treatment which gradually induces a change, and restores healthy functions without sensible evacuation." (Webster.) (Lippincott.)

In the treatment of respiratory affections iodine and its combinations hold an important position. That they increase and facilitate secretion by the respiratory mucous membranes is a well-known fact. It has been assumed that this action is essentially that of functional stimulation.

The purpose of this contribution is to make known a method by which iodine favorably influences respiratory infections, viz., a specific germicidal action.

In two previous communications,[1] "Clinical Features of Endemic Grippe in Children in San Francisco and Vicinity," "Grippe on the Pacific Coast,"[2] I have directed attention to the beneficent action of the iodides in cases of respiratory grippe. Extensive study of the effect of iodides in respiratory affections has led me to the conclusion that the iodides exert a specific germicidal action on bacteria infecting the respiratory mucous membranes. My studies on which this deduction is based include cases of influenza, staphylococcus, streptococcus and pneumococcus infections.

The conclusion that iodine has a germicidal action in respiratory affections is supported by the facts that (1) iodine and the iodides possess definite antiseptic properties, (2) iodine and the iodides are eliminated by the respiratory organs.

In corroboration of the first assertion the following observations are recorded:

Staphylococci and streptococci were inoculated upon (1) bouillon containing 1% ammonium iodide, (2) bouillon containing 1% hydriodic acid, (3) bouillon containing 1% each iodine and potassium iodide.

RESULTS.

(1) Bouillon, 1% ammonium iodide, incubated at 37 C.
after 24 hours, clear, no growth.
after 48 hours, clear, no growth.

(2) Bouillon, 1% hydriodic acid.
after 24 hours, clear, no growth.
after 48 hours, clear, no growth.

(3) Bouillon, 1% iodine and 1% potassium iodide.
after 24 hours, no growth.

(4) Bouillon (control), after 24 hours cloudy, exuberant growth.

As proof of the second assertion the following reports seem conclusive:

(1) Feb. 27, 1912, 11 a. m. Two grains ammonium iodide (in capsule) were administered to an adult male.

Feb. 28, 1912, 2 p. m. Iodine reaction in sputum positive.

Feb. 29, 1912, 12 m. Reaction in sputum negative.

(2) March 1, 1912. One grain ammonium iodide (in capsule) administered.

March 2, 1912, 12 m. Iodine reaction in sputum positive.